

Anguilla rostrata (American Eel)

Priority 2 Species of Greatest Conservation Need (SGCN)

Class: *Actinopterygii* (Ray-finned Fishes)

Order: *Anguilliformes* (True Eels)

Family: *Anguillidae* (Freshwater Eels)

General comments:

General information:

<http://www.nefsc.noaa.gov/sos/spsyn/op/eel/>

<http://www.asmfc.org/species/american-eel>

Recent significant decline: http://www.asmfc.org/uploads/file/americanEelBenchmarkStockAssessmentReport_May2012.pdf

Risk of extirpation: http://www.fws.gov/northeast/newsroom/pdf/American_eel_petition_100430.pdf

High regional conservation priority: http://www.asmfc.org/uploads/file/amEelAddendum_III_Aug2013.pdf

No Species Conservation Range Maps Available for American Eel

SGCN Priority Ranking - Designation Criteria:

Risk of Extirpation: NA

State Special Concern or NMFS Species of Concern:

Anguilla rostrata is listed as a species of Special Concern in Maine.

Recent Significant Declines:

American Eel is currently undergoing steep population declines, which has already led to, or if unchecked is likely to lead to, local extinction and/or range contraction.

Notes:

http://www.asmfc.org/uploads/file/americanEelBenchmarkStockAssessmentReport_May2012.pdf

Regional Endemic: NA

High Regional Conservation Priority:

Committee on the Status of Endangered Wildlife in Canada (COSEWIC):

Status: T, Last Examination: 5/1/2012, Change: In a higher risk category, Canada Occurrence: ON, QC, NB, PE, NS, NL, Atlantic Ocean

Atlantic States Marine Fisheries Commission Stock Assessments:

Status: Decreasing, Status Comment: No overfishing determination can be made at this time based solely on the trend analyses performed.

Reference: Atlantic States Marine Fisheries Commission. 2012. Stock Assessment Report No. 12-01, American Eel Benchmark Stock Assessment. Available from: <http://www.asmfc.org/fisheries-science/stock-assessments#StockAssessments>

High Climate Change Vulnerability: NA

Understudied rare taxa: NA

Historical: NA

Culturally Significant:

Species identified as both biologically vulnerable and culturally significant by Maine's tribes.

Habitats Assigned to American Eel:

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Stressor Priority Level based on Severity and Actionability	Moderate Severity		High Severity	
	Highly Actionable		Medium-High	
	Moderately Actionable		Medium	
	Actionable with Difficulty		Low	

IUCN Level 1 Threat Biological Resource Use**IUCN Level 2 Threat:** Fishing and Harvesting of Aquatic Resources**Severity:** Moderate Severity **Actionability:** Moderately actionable**Notes:** Commercial and Recreational harvest can be effectively regulated or minimized, however timescale of effect on adult spawning populations is long**IUCN Level 1 Threat Transportation and Service Corridors****IUCN Level 2 Threat:** Roads and Railroads**Severity:** Moderate Severity **Actionability:** Moderately actionable**Notes:** Road/Stream crossing improvements can greatly facilitate habitat accessibility for this species, however improvements difficult to implement unless culverts fail or very strong local support and budget

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None. *Only species specific conservation actions that address high (red) or medium-high (orange) priority stressors are summarized here.*

Conservation Actions Associated with the Diadromous Fish Guild:

Conservation Action	Category: Public Outreach	Biological Priority: moderate	Type: on-going
Continue to work with the fishing industry to develop gear modifications that reduce of bycatch of diadromous fishes			

Stressor(s) Addressed By This Conservation Action

Fishing and Harvesting of Aquatic Resources

Conservation Action	Category: Public Outreach	Biological Priority: high	Type: on-going
Conduct education to increase awareness of the importance of these species to maintaining productive ecosystem functioning.			

Stressor(s) Addressed By This Conservation Action

Lack of knowledge, Fishing and Harvesting of Aquatic Resources

Conservation Action	Category: Research	Biological Priority: high	Type: on-going
Improve understanding of species distribution especially in regards to ecosystem interactions, predator-prey relationships, and prey buffering concepts			

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Conservation Action	Category: Habitat Management	Biological Priority: high	Type: on-going
Encourage improved municipal planning for siting for new or retrofitting development, taking into account future environmental change, to improve connectivity for diadromous fish passage			

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Stressor(s) Addressed By This Conservation Action

Industrial and Military Effluents, Domestic and Urban Waste Water, Commercial and Industrial Areas , Housing and Urban Areas

Conservation Action	Category: Survey and Monitoring	Biological Priority: high	Type: on-going
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Ground-truth mapped habitat and compare to historical maps to monitor change over time, may require updating mapping plans to map more frequently

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Conservation Action	Category: Survey and Monitoring	Biological Priority: critical	Type: on-going
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Monitor population stock status through surveys and sampling programs

Stressor(s) Addressed By This Conservation Action

Other Threat

Conservation Action	Category: Research	Biological Priority: critical	Type: on-going
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Determine the location and timing of critical habitat use (for endangered species) and important habitat use for diadromous fishes at different life history stages

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Conservation Action	Category: Research	Biological Priority: high	Type: new
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Investigate methods to reduce incidental bycatch in commercial and recreational fisheries

Stressor(s) Addressed By This Conservation Action

Fishing and Harvesting of Aquatic Resources

Conservation Action	Category: Research	Biological Priority: high	Type: on-going
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Gather information to support management, including stock assessments, population genetics, population monitoring, etc.

Stressor(s) Addressed By This Conservation Action

Fishing and Harvesting of Aquatic Resources, Lack of knowledge

Conservation Action	Category: Research	Biological Priority: high	Type: new
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Improve understanding of the relative roles of natural predation, fishing mortality, and climate change in stock dynamics

Stressor(s) Addressed By This Conservation Action

Fishing and Harvesting of Aquatic Resources, Lack of knowledge, Problematic Native Species-Diseases, Habitat Shifting or Alteration

Conservation Action	Category: Public Outreach	Biological Priority: high	Type: on-going
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Encourage the use of more targeted fishing gear in order to reduce bycatch and habitat disturbance

Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

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The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.